I/WE CLAIM:

1. A nucleic acid sequence according to any one of the sequences in Table 1.

2. A nucleic acid sequence according to claim 1 for use as PCR primer pairs for multiplex SNP analysis of a plurality of SNPs simultaneously.

3. A set of oligonucleotides comprising at least one or all the sense and antisense primer set of Table 1, or any combination thereof.

4. A set of oligonucleotide primers comprising sense and antisense primer, wherein said oligonucleotide primer set is suitable for amplifying and detecting a plurality of blood group or HPA SNPs simultaneously in a single tube.

5. A set of oligonucleotide primers, wherein said primer set is selected from one or more, or all, primers of Table 1 or any combination thereof.

6. A nucleic acid sequence according to any one of the sequences in Table 2.

7. A nucleic acid sequence according to claim 6 for use as extension probes for the identification of SNPs.

8. A nucleic acid sequence according to claim 2 or 7, wherein said SNPs relate to blood group and platelet antigens.

9. An oligonucleotide set that distinguishes between the blood group or HPA genotypes, wherein said oligonucleotide set specifically hybridizes to a selected SNP corresponding to a specific antigen genotype.

10. An oligonucleotide set according to claim 9, wherein said set is selected from one or more, or all, primers of Table 1 or any combination thereof.

11. An oligonucleotide set according to claim 10, wherein said at least one oligonucleotide hybridizes the HPA-1 GP3A SNP for the determination of the HPA genotype and corresponding phenotype.

12. An oligonucleotide primer and probe set for analyzing a plurality of SNPs simultaneously, wherein said SNPs comprises one, more than one or any combination of SNPs selected from the group consisting of RhD RHD Exon 4 C/T; RhD RHD Exon 9 A/G; RhC/c RHCE Exon 2 T/C; RhE/e RHCE Exon 5 C/G; S/s GYPB Exon 4 T/C; K/k KEL Exon 6 T/C; Kp^a/Kp^b KEL Exon 8 T/C; FY/FY0 FY Promoter T/C; Fy^a/Fy^b FY Exon 2 G/A; Jk^a/Jk^b KIDD Exon 9 G/A; Di^a/Di^b DIEGO Exon 19 T/C; and HPA-1a/b GP3A Exon 3 T/C.

13. An oligonucleotide primer and probe set for analyzing the SNPs of claim 12, wherein one, more than one or all of said primer set is selected from Table 1, and wherein one, more than one of all of said probe set is selected from Table 2; such that the selection of primer and probe combinations correspond to the SNP being analyzed.

14. A method of simultaneously analyzing a plurality of antigens in a sample wherein said method comprises:

(a) isolation and purification of genomic DNA from said sample;

(b) multiplex PCR amplification of DNA regions encompassing all SNPs of interest,

(c) the digestion of multiplex PCR amplified products with restriction enzymes;

(d) identification of SNPs using single-base pair primer extension of the amplified DNA fragments using the probes of Table 2;

(e) hybridization of extension products; and

(f) analysis of SNP extension products to determine the SNP genotype.

15. A method according to claim 14, wherein said restriction enzymes are Exonuclease I and Shrimp alkaline phosphatase for the purpose of removing excess dNTPs and/or oligonucleotides.

16. A method according to claim 14, wherein said extension products are hybridized to tag-arrayed microplate.

17. A method according to claim 14, wherein the multiplex PCR amplification comprises amplification with the nucleotide primer and probes of any one of claims 1 to 13.

18. A method according to claim 14, wherein a thermal cylcer is used to carry out the single-pair primer extension.

19. A method according to claim 14, wherein any machine or method capable of analyzing SNPs may be used.

20. A method according to claim 14, wherein GenomeLab SNPstream (Beckman Coulter Inc.) is used to analyze SNP extension products.

21. A method of claim 14, wherein said method is carried out in a single reaction tube or single well of a multiwell plate.

22. A method of claim 14, wherein said method is automated.

23. A method according to claim 14, wherein said antigens are red blood cell and platelet blood group antigens.

24. A method according to claim 14, wherein said antigens are selected from the group consisting of ABO, Rh (D, C, c, E, e), MNS, P, Lutheran, Kell (K, k), Lewis, Duffy (Fy^a, Fy^b), Kidd (Jk^a, Jk^b) or any other antigen for which a SNP has been identified.

25. A method for the simultaneous detection of the presence or absence of blood cell antigen SNPs simultaneously using one or more of the the oligonucleotides of Table 1 and Table 2, or any corresponding combination thereof.

26. A method according to any one of claims 14-25, wherein 12 blood group and HPA SNPs are analyzed in a single tube.

27. A method according to claim 14, wherein the HPA-1 GP3A SNP is analyzed for the determination of HPA genotype and corresponding phenotype.

28. A method for the identification of rare blood group genotypes, said method comprising identifying and analyzing the corresponding rare SNPs combinations thereof.

29. A method of screening or analyzing a test sample for the presence or absence of blood group SNPs, wherein said analysis simultaneously screens a plurality of SNPs in a single reaction tube.

30. A method according to claim 29, wherein said test sample is a human blood sample.

31. A method according to claim 29, wherein said SNPs are selected from the SNPs of claim 12.

32. A method according to claim 29, wherein said SNPs are any blood-group SNPs capable of distinguishing between blood group antigen phenotypes.

33. A method according to claim 29, wherein said method comprises:

(a) isolation and purification of genomic DNA from said sample;

(b) multiplex PCR amplification of DNA regions encompassing all SNPs;

(c) the digestion of multiplex PCR amplified products with restriction enzymes;

(d) identification of SNPs using single-base pair primer extension of the amplified DNA fragments;

(e) hybridization of extension products; and

(f) analysis of SNP extension products to determine the SNP genotype.

34. The use of the primer pairs of Table 1 in multiplex PCR and the probes of Table 2 for the analysis thereof.

35. The use according to claim 34, wherein said multiplex PCR is carried out in a single reaction tube.

36. The use according to claim 34, wherein said multiplex PCR is automated to simultaneously analyse blood group and platelet antigen (preferably HPA) SNPs.

37. The use according to claim 34, wherein said SNP analysis results in antigen genotypes and corresponding phenotypes of a test sample.

38. A method of antigen typing, preferably blood group antigen and platelet antigen, more preferably, human platelet antigen, using the primer pairs of Table 1, and analysis using the probes of Table 2.

39. A method of claim 38, wherein said typing uses a multiplex PCR SNP analysis format, wherein said analysis is preferably automated.

40. An oligonucleotide primer and probe set for analyzing a plurality of SNPs simultaneously, wherein said SNPs comprises one, more than one or any combination of SNPs selected from the group consisting of a SNP as represented in Tables 1, 1A or 2.

41. A method of simultaneously analyzing a plurality of antigens in a sample wherein said method comprises:

(a) isolation and purification of genomic DNA from said sample;

(b) multiplex PCR amplification of DNA regions encompassing all SNPs of interest,

(c) the digestion of multiplex PCR amplified products with restriction enzymes;

(d) identification of SNPs using single-base pair primer extension of the amplified DNA fragments using probes corresponding to said SNPs of interest;

(e) hybridization of extension products; and

(f) analysis of SNP extension products to determine the SNP genotype.

42. The method of claim 33, wherein said step of multiplex PCR amplification includes using the primer pairs of Table 1.

43. The method of claim 33, wherein said step of identification of SNPs includes using the probes of Table 2.

44. The method of claim 33, wherein said step of hybridization includes using the probes of Table 2.

45. The method of claim 29, wherein said blood group SNP is a SNP of Table 1 or Table 1A.